

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

WAINWRIGHT *et al.*

Serial No. 07/883,457

Filed: May 15, 1992

For: ENDOTOXIN BINDING AND  
NEUTRALIZING PROTEIN AND USES  
THEREOF

Art Unit: (to be assigned)

Examiner: (to be assigned)

Atty Docket: 1413.0010004/RWE

PRELIMINARY AMENDMENT

Honorable Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

Sir:

Prior to examination of the above-identified patent application, Applicants respectfully request entry of the following amendments:

***In the Specification:***

Page 37, line 17, delete "the inventors examined";

line 19, after "endotoxin" insert --was examined--.

***In the Claims:***

Kindly cancel Claims 58-64, 66, and 68.

Please amend the claims as follows:

Claim 69, lines 1 and 2, delete "Claim 14, 65 or 66" and insert therefor —Claim 14 or 65--.

Claim 73, lines 4 and 5, delete "Claim 14, 65 or 66" and insert therefor —Claim 14 or 65--.

Claim 77, line 4, delete "Claim 14, 65 or 66" and insert therefor —Claim 14 or 65--.

Claim 80, lines 4 and 5, delete "Claim 14, 65 or 66" and insert therefor —Claim 14 or 65--.

**Remarks**

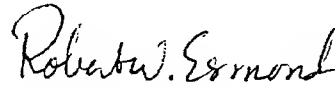
Claims 1-57, 65, 67 and 69-81 remain pending in the present application. Claims 58-64, 66 and 68 have been canceled. Claims 69, 73, 77 and 80 have been amended to delete those claims' dependencies from a canceled claim.

The specification was amended to more accurately reflect the circumstances under which the experiments were undertaken.

Applicants respectfully assert that no new matter has been added by way of the above amendments, and that this application is now in condition for examination on the merits.

Respectfully submitted,

**STERNE, KESSLER, GOLDSTEIN & FOX**



Robert W. Esmond  
Attorney for Applicants  
Registration No. 32,893

Date: *Nov. 9, 1992*

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

WAINWRIGHT *et al.*

Appl. No. *To be assigned*

Filed: *Herewith*

For: **Endotoxin Binding and  
Neutralizing Protein and Uses  
Thereof**

Confirmation No.: *To be assigned*

Art Unit: *To be assigned*

Examiner: *To be assigned*

Atty. Docket: 1413.001000B/RWE/MTT

**Second Preliminary Amendment**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In advance of prosecution of the captioned application, Applicants submit the following Second Preliminary Amendments and Remarks. This Second Preliminary Amendment is provided in the following format:

(A) A clean version of each replacement paragraph/section/claim along with clear instructions for entry;

(B) Starting on a separate page, appropriate remarks and arguments.

37 C.F.R. § 1.111 and MPEP 714; and

(C) Starting on a separate page, a marked-up version entitled: "Version with markings to show changes made."

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R.

§ 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036

***Amendments***

Please amend the application as follows:

***In the Specification:***

In the specification at page 1, please delete the first full paragraph, and substitute therefor the following paragraph:

The present application is a DIVISIONAL of U.S. Application No. 08/850,011 filed on May 1, 1997, which claims the benefit of U.S. Application No. 08/476,940 filed on June 7, 1995 (U.S. Patent No. 5,627,266), which is a DIVISIONAL of U.S. Application No. 08/264,244 filed on June 22, 1994 (U.S. Patent No. 5,594,113) which is a CONTINUATION of U.S. Application No. 07/883,457 filed on May 15, 1992, which is a CONTINUATION-IN-PART of U.S. Application No. 07/701,501 filed on May 16, 1991, which is a CONTINUATION-IN-PART of U.S. Application No. 07/480,957 filed on February 16, 1990, and which is a DIVISIONAL of U.S. Application No. 07/210,575 filed on June 23, 1988.

***In the Claims:***

Please amend the claims as follow:

Please cancel claims 1-70 and 73-79 without prejudice to the right to prosecute the subject matter of these claims in one or more continuing or divisional application or

disclaimer of the subject matter contained therein.

Please amend the claims as follows:

Please substitute the following claim 71 for the currently pending claim 71.

71. (Once amended) A biosensor device comprising an endotoxin binding protein immobilized on a solid phase support wherein said endotoxin binding protein is from a horseshoe crab *Limulus polyphemus*.

72. (Reiterated) The biosensor device of Claim 71, wherein said solid phase support is quartz or silicon.

Please substitute the following claim 80 for the currently pending claim 80.

80. (Once amended) A method for assaying for endotoxin concentration in a material suspected of containing endotoxin, which comprises contacting said material with a biosensor device comprising the endotoxin binding protein of a horseshoe crab *Limulus polyphemus* wherein said endotoxin binding protein is immobilized on a solid phase support, detecting a change in capacitance, resistance, or acoustic wave of said solid phase support, and correlating the change with the changes observed with standard solutions of endotoxin binding protein.

81. (Reiterated) The method of Claim 80, wherein said solid phase support is quartz or silicon.

Please add the following new claims 82 and 83.

82. (New) The biosensor device of claim 71, wherein said immobilized endotoxin binding protein has the amino acid sequence of SEQ ID. NO: 1 and is free of the contaminating components naturally associated with the horseshoe crab.

83. (New) The method of claim 80, wherein said endotoxin binding protein has the amino acid sequence of SEQ ID. NO: 1 and is free of the contaminating components naturally associated with the horseshoe crab.

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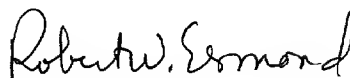
***Remarks***

By the foregoing amendments, claims 1-70 and 73-79 have been cancelled without prejudice or disclaimer. Upon entry of the foregoing amendments, claims 71-72 and 80-83 are pending in the application, with claims 71 and 80 being independent claims.

It is believed that the present application is in condition for immediate examination. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Robert W. Esmond  
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Registration No. 32,893

Date: Dec. 3, 2001

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**Version with markings to show changes made**

***In the Specification:***

In the specification at page 1, please delete the first full paragraph, and substitute therefor the following paragraph:

The present application is a DIVISIONAL of U.S. Application No. 08/850,011 filed on May 1, 1997, which claims the benefit of U.S. Application No. 08/476,940 filed on June 7, 1995 (U.S. Patent No. 5,627,266), which is a DIVISIONAL of U.S. Application No. 08/264,244 filed on June 22, 1994 (U.S. Patent No. 5,594,113) which is a CONTINUATION of U.S. Application No. 07/883,457 filed on May 15, 1992, which is a CONTINUATION-IN-PART of U.S. Application No. 07/701,501 filed on May 16, 1991, which is a CONTINUATION-IN-PART of U.S. Application No. 07/480,957 filed on February 16, 1990, and which is a DIVISIONAL of U.S. Application No. 07/210,575 filed on June 23, 1988.

***In the Claims:***

Claims 1-70 and 73-79 have been cancelled.

The following claims 71 and 80 have been amended as follows:

71. (Once amended) A biosensor device comprising an [The immobilized] endotoxin binding protein immobilized on a solid phase support wherein said endotoxin binding protein is from a horseshoe crab *Limulus polyphemus* [of claim 69 which is a biosensor device].

80. (Once amended) A method for assaying for endotoxin concentration in a material suspected of containing endotoxin, which comprises contacting said material with a biosensor device comprising the endotoxin binding protein of [claim 14 or 65]a horseshoe crab *Limulus polyphemus* wherein said endotoxin binding protein is immobilized on a solid phase support, detecting a change in capacitance, resistance, or acoustic wave of said solid phase support, and correlating the change with the changes observed with standard solutions of endotoxin binding protein.

New claims 82 and 83 are sought to be entered.